CLAIMS:

1. An electronic device comprising a protective barrier layer stack comprising a first barrier layer of a first amorphous carbon modification and a second barrier layer of a second amorphous carbon modification.

2. An electronic device according to claim 1, wherein the electronic device is an organic electroluminescent device.

3. An electronic device according to claim 1, wherein the first and the second amorphous carbon modification are selected from the group of amorphous carbon modifications comprising amorphous carbon, tetrahedral amorphous carbon, hydrogenated amorphous carbon, tetrahedral hydrogenated amorphous carbon, diamond-like-carbon, and glassy carbon.

4. An electronic device according to claim 1, wherein the first and the second amorphous carbon modification are selected from the group of doped amorphous carbon modifications, wherein the dopant is selected from the group of boron, silicon, nitrogen, phosphorus, oxygen, and fluorine.

5. An electronic device according to claim 1, wherein at least one of the first and second barrier layers comprising a first or second amorphous carbon modification is selected from the barrier layers having a plasmon energy > 27 eV.

6. An electronic device according to claim 1, wherein the first and the second amorphous carbon modification are selected from the group of amorphous carbon modifications having a refractive index $n > 1.8$.

7. An electronic device according to claim 1, wherein the first and the second amorphous carbon modification are selected from the group of amorphous carbon modifications having a refractive index $n > 2.0$.

8. An electronic device according to claim 1, wherein the first barrier layer of a first amorphous carbon modification has a first refractive index and the second barrier layer of a second amorphous carbon modification has a second refractive index higher than the first refractive index.

9. An electronic device according to claim 1, wherein the first barrier layer of a first amorphous carbon modification has a first refractive index $n1 > 1.8$ and the second barrier layer of a second amorphous carbon modification has a second refractive index $n2 > 2.0$.

10. An electronic device according to claim 1, comprising an interlayer between the first barrier layer of a first amorphous carbon modification and a second barrier layer of a second amorphous carbon modification.

11. An electronic device according to claim 6, wherein the interlayer comprises a polymer selected from the group of parylenes, benzocyclobutanes, polyimides, fluorinated polyimides, poly(arylene ethers), poly(naphthalenes), poly(norbones), fluoropolymeres (e.g. PTFE), chlorofluoropolymeres(PCFP), and hydrocarbons.

12. An electronic device according to claim 11, wherein all amorphous carbon modifications are selected from the group of amorphous carbon modification comprising at least 10 % hydrogen bound to the carbon atoms.

13. An electronic device according to claim 1, comprising an adhesion layer between the first barrier layer of a first amorphous carbon modification and the electroluminescent diode

14. An electronic device according to claim 1, comprising a top layer lying on and in contact with the second barrier of a second carbon modification.

15. An electronic device as claimed in claim 1, characterized in that the layer thickness of the barrier layer stack $d \geq 30$ nm.

16. A method of manufacturing an electronic device comprising an electroluminescent diode and a protective barrier layer stack comprising a first barrier layer of a first amorphous carbon modification and a second barrier layer of a second amorphous carbon modification, wherein the first and the second protective barrier layer are deposited from the gas phase.

17. A method of manufacturing an electronic device as claimed in claim 15, characterized in that the protective layer is deposited by means of a RF plasma CVD process.

18. A method of manufacturing an electroluminescent device as claimed in claim 15, characterized in that the operating point of the deposition from the gas phase lies in the kinetically controlled range.